REMARKS

Status of the Claims

Claims 1-32 are pending in the application. Claims 1-4, 11-14, 17-21, 24, 27 and 30-32 were withdrawn from consideration by the Examiner as directed to non-elected invention. Claims 5-10, 15-16, 22-23, 25-26 and 28-29 are under examination and stand rejected in the instant office action.

With entry of the present response, independent claim 5 has been amended to specify the heavy chain CDR1 and CDR2 sequences of the claimed antibodies. Support for the amendment is replete in the specification, e.g., Figure 6. In addition, previously independent claim 15 has now been made depending from claim 5. Dependent claims 6, 7 and 16 have been accordingly canceled.

Applicant submits that the amendments introduced herein do not contain new matter. Applicant notes that the claim amendments are intended as an additional effort to facilitate prosecution of the subject application, and should not be construed as acquiescence of any ground of rejections.

The following remarks are provided to further address the substantial issues raised in the instant Office Action.

Rejection under 35 U.S.C. 112 (1st para.)- written description

Claims 5-10, 15-16, 22-23, 25-26 and 28-29 were rejected as allegedly not in compliance with the written description requirement. The Examiner acknowledged that Applicant is in possession of the specific anti-αIIBβ3 antibodies exemplified in the specification. However, the Examiner was of the opinion that Applicant is not in possession of all antibodies encompassed by the present claims because the claims only recite

the HCDR3 sequence of the claimed antibodies.

Applicant does not agree to the rationale advanced by the Examiner in rendering the instant rejection. Nevertheless, in an effort to advance prosecution of the subject application, Applicant has herein amended independent claim 5 by also setting forth the specific heavy chain CDR1 and CDR2 sequences of the claimed antibodies. The Examiner is advised that, other than CDR3, the other heavy chain CDR sequences of the antibodies correspond to that of the well known human germline heavy chain sequence DP-47. This is clearly disclosed in the specification, e.g., Table 2; page 25, 2nd full paragraph; page 19, last paragraph; and page 24, last paragraph. The specific heavy chain CDR1 and CDR3 sequences of the claimed antibodies, which were derived from the DP-47 gene, are also disclosed in Figure 6 of the subject specification.

Applicant wishes to further advise the Examiner that the exact light chain sequence is not essential to the claimed antibodies. Rather, the inventors demonstrated that heavy chain with the same modified CDR3 sequences can be paired with different light chains and maintain the binding activity. For example, as shown in Table 2 and Fig. 6, antibodies RAD3, RAD9, RAD12 and RAD 34 all have identical heavy chain CDR sequences. While these 4 antibodies have different light chains (see Table 2), they all share similar binding characteristics and activities in inhibiting platelet aggregation as disclosed in the subject specification. Thus, a specific light chain sequence is not necessary to demonstrate that Applicant is in possession of the claimed antibodies.

In light of the above amendments and clarifications, Applicant submits that the antibodies encompassed by the

presently amended claims are adequately described in the subject specification. Accordingly, withdrawal of the instant rejection is respectfully requested.

Rejection under 35 U.S.C. 112 (1st para.)- enablement

Claims 5-10, 15-16, 22-23, 25-26 and 28-29 were also rejected as allegedly not enabled. The Examiner noted that Applicant invention enables the specific anti-αIIBβ3 antibodies exemplified in the specifications but not antibodies encompassed by the full scope of the previously presented claims. The basis for the rejection appears to be essentially the same as that advanced by the Examiner for the written description rejection discussed above.

In response, Applicant notes that the claimed invention has now been limited to anti-αIIBβ3 antibodies with specific heavy chain CDR sequences as recited in claim 5, as well as related compositions and uses. Applicant's above remarks on the written description rejection, where relevant, are equally applicable to the instant rejection. In addition, Applicant submits that enabling disclosure for the presently claimed invention is replete in the specification. For example, Applicant showed that antibodies with such CDR sequences are capable of inhibiting the specific interaction between integrin αIIBβ3 and fibrinogen *in vitro* (see, e.g., Figure 3). Moreover, as shown in Figure 4 and Table 3, the subject specification also demonstrated that such antibodies can also inhibit platelet aggregation *ex vivo*. Other than these specific exemplifications, the specification further described various assays that can be readily employed to examine relevant

activities of the anti-αIIBβ3 antibodies of the invention, e.g., assays for fibrinogen binding inhibition or platelet aggregation inhibition.

The above discussed teachings of the subject specification along with knowledge well known in the art would undoubtedly enable the skilled artisan to make and use the claimed antibodies without any undue experimentation. Further, as platelet aggregation is essential to thrombus formation, inhibition of platelet aggregation by the claimed antibodies can be reasonably expected to be effective in treating and preventing symptoms and conditions associated with thrombosis. Therefore, claims directed to therapeutic uses of the anti-αIIBβ3 antibodies (e.g., claims 25, 26, 28 and 29) and related pharmaceutical compositions (e.g., claims 22 and 23) for treating thrombosis are also enabled by the subject specification. As such, Applicant respectfully request that the instant rejection be withdrawn.

Rejections under 35 U.S.C. 102

In the office action, the Examiner maintained the rejection of Claims 15, 23, 26 and 29 under 35 U.S.C. 102(e) as alleged anticipated by U.S. Patent No. 7,812,136, and the rejection of these claims under 35 U.S.C. 102(b) as alleged anticipated by Quinn et al. (Circulation 99:2231-8, 1999).

Claim 15 has now been amended to encompass anti-αIIBβ3 antibodies which share the same binding specificities as anti-αIIBβ3 antibodies bearing the specific heavy chain CDR sequences set forth in claim 5. While the cited art may have discussed antibodies that bind to integrin αIIBβ3, these antibodies certainly would not have the same binding specificities as (and

therefore compete with) the specific anti-αIIBβ3 antibodies of claim 5. Therefore, claim 15 and claims depending therefrom (i.e., claims 23, 26 and 29) are clearly novel over the cited art. The instant rejections should accordingly be withdrawn.

CONCLUSION

In light of the foregoing, Applicant respectfully submits that the claims now pending in the subject patent application are in condition for allowance, and notification to that effect is earnestly requested. If a telephone conference would expedite prosecution of this application, please telephone the undersigned attorney at 858-784-2937.

The Director is hereby authorized to charge our Deposit Account No. 19-0962 in the event that there are any additional charges associated with the present Petition or any Response in connection with this application.

Respectfully submitted,

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Date

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